ABSTRACT

A position detection apparatus including a detection unit for an absolute track including a plural number of ABS heads for absolute track, in which the separation between neighboring heads is broadened. The n ABS heads 10-1 to 10-n are arrayed to satisfy the following equations 1 and 2 when n is an even number and the following equations 1 and 3 when n is an odd number:

$\lambda_1 = m\lambda$, m being an integer not less than 2

...(1)

$\lambda_1 \neq k(2^{n/2} + 1)\lambda$, k being a natural number

...(2)

$\lambda_1 \neq k(2^n + 1)\lambda$

...(3).

By arraying the ABS heads 10-1 to 10-n under these conditions, the separation between neighboring ones of the ABS heads 10-1 to 10-n can be 2λ or larger.